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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
BOARD OF PATENT APPEALS AND INTERFERENCES

Application of:
Tracy D. Powers, et al.

Serial No. 09/919,192

Filed: July 31, 2001

For: REMOTE RECONFIGURATION
SYSTEM

Confirmation No: 3966

Art Unit: 2152

Examiner: Ramsey REFAI

Customer No. **32658**

Attorney Docket No.: P5387

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Commissioner for Patents
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2. Appellants' Brief Under 37 CFR § 41.37;
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TRANSMITTAL OF BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Please find enclosed an Appellants' Brief for the above application. Also, please find enclosed a check in the amount of \$500.00. Any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

October 12, 2005

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APPELLANTS' BRIEF UNDER 37 CFR § 41.37

I. Real Party in Interest

Sun Microsystems, Inc.
4120 Network Circle
Santa Clara, CA 95054
USA

II. Related Appeals and Interferences

No other appeals or interferences are currently known to Appellants that will directly affect, be directly affected by, or have a bearing on the decision to be rendered by the Board of Patent Appeals and Interferences in the present appeal.

III. Status of Claims

Claims 1-7, 9-11, and 17-20 are pending in the application, with claims 8 and 12-16 being cancelled. No claims have been allowed, and all pending claims stand rejected. The rejection of claims 1-7, 9-11, and 17-20 is the subject of this appeal.

IV. Status of Amendments

Appellants believe that all claim amendments have been entered.

Claims 1-7, 9-11, and 17-20, including any proposed and entered claim amendments, are provided in the attached Claims Appendix.

V. Summary of Claimed Subject Matter

Claims 1, 7, and 17 are independent claims that are being appealed.

Claim 1 is directed to a remote configuration computer system that includes a storage management host installed in a client data storage system. Figure 1 shows an exemplary reconfiguration system 100 with a storage management host 144 installed in a client data storage system 140. The description of system 100 begins at line 12 of page 7 in Applicants' specification. According to claim 1, the data storage system has a first configuration, which may be stored as client configurations 172 in memory 170 and/or gathered in the system 100 as described at steps 210 and 224 of the remote reconfiguration process 200 of Figure 2 as described at page 13, line 1 to page 14, line 28. In conjunction with "levels of service" for such reconfigurations, exemplary reconfigurations of a data storage system and/or storage unit are described from page 15, line 12 to page 16, line 21. With reference to Figure 1, the storage management host 144 of claim 1 provides remote access and a communication link to the master storage unit 150, 152, 160, or 162 and host 166 of the data storage system, e.g., via Ethernet connection 146 and serial ports 148.

Significantly, the reconfiguration computer system of claim 1 further comprises a reconfiguration center, such as center 110 of Figure 1, located remote to the storage management system, e.g., system 140 of Figure 1. According to claim 1, the reconfiguration center receives a reconfiguration request and in response transfers **a logical implementation "selected or created based on the reconfiguration request and the first configuration" to the client data storage system "via the storage management host."** The claimed reconfiguration center and this particular claim element(s) are described with reference to Figure 2 and steps or processes 220, 230, 240, 250, and 260 and in the specification from page 13, line 13 to page 18, line

18 with emphasis being provided of creating a logical implementation of a data storage subsystem reconfiguration based on a received request and on the existing or first configuration of the data storage system.

Independent claims 7 and 17 are directed to methods of remotely reconfiguring a data storage system with limitations similar to that of claim 1 presented in method form. As a result, the summary of the claimed invention for claim 1 is believed at least partially applicable to claims 7 and 17. For example, the elements of claims 7 and 17 can be found in process 200 of Figure 2 and/or in the description of operations of the reconfiguration system 100 of Figure 1.

More specifically, claim 7 is directed to a method for remotely reconfiguring a data storage system that includes: monitoring a client data storage system (see step 210 in Figure 2 and client data storage system 140 and remote reconfiguration center 110 of Figure 1), based on such monitoring transmitting a recommended reconfiguration for a monitored master storage unit (see steps 210 and 214 of Figure 2 and remote reconfiguration center 110, reconfiguration tools 176, storage management host 144, and master storage units 150, 152, 160, 162, 164 of Figure 1), receiving a reconfiguration request (see step 214 or 220 of Figure 2), in response to the request determining the first configuration of the master storage unit (see step 210 or 224 of Figure 2), and then transferring a logical implementation for executing to reconfigure the master storage unit that is generated based on the reconfiguration request, the first configuration, and the results of the monitoring (see steps 230, 240, 250, 260, 270, 280 of Figure 2).

Claim 17 has some similarity to the method of claim 7 and the description of claim 7 is relevant to claim 17 as the claimed methods calls for a reconfiguration system to receive a reconfiguration request and to determine a first configuration of a data storage system associated with the request. The method of claim 17 differs from claim 7 by calling for identifying a “level of configuration services” for the data storage system and defining a logical implementation for the data storage system based on the identified level of service and based on the first configuration. The concept of “levels of service” are described in detail in Applicants’ specification at page 15, line 12 to page 16, line 20, and this description makes it clear how each of

these levels of service may be used to determine how to reconfigure a data storage system in combination with an existing or first configuration. As can be seen, the method involves defining differing reconfigurations for a data storage system based on the level of service determined for the storage system (e.g., did a customer or company contract for a basic level of service or a higher level?, do they want reconfiguration performed monthly or at a differing frequency?, and other similar service level questions). The method of claim 17 continues with the logical implementation being transferred to the storage management host installed on the data storage system and executed to reconfigure the master storage unit (see steps 280 and 290 of the method 200 shown in Figure 2).

VI. Grounds of Rejection to be Reviewed on Appeal

1. Claims 7, 11, and 17-20 stand rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Pat. No. 6,584,499 (“Jantz”).
2. Claims 1, 4, 5, and 9-10 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of U.S. Pat. No. 6,009,466 (“Axberg”).
3. Claims 2 and 3 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg as applied to claim 1 further in view of U.S. Pat. No. 5,151,895 (“Vacon”).
4. Claim 6 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg further in view of “Official Notice.”

VII. Argument

A. Rejection of Claims 7 and Under 35 U.S.C. §102(e) Based on Jantz is Improper

In the June 21, 2005 Office Action, the Examiner rejected claims 7 and 11 under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 6,584,499 (“Jantz”). This rejection is traversed based on the following remarks, and Appellants request that the rejection be reversed as not properly supported by Jantz.

Claim 7 is directed to a method for remotely reconfiguring a data storage system that includes: monitoring a client data storage system, based on such monitoring transmitting a recommended reconfiguration for a monitored master storage unit, receiving a reconfiguration request, in response to the request determining the first configuration of the master storage unit, and then transferring a logical implementation for executing to reconfigure the master storage unit that is generated based on the reconfiguration request, the first configuration, and the results of the monitoring. As discussed in the filed Amendments, Jantz does not teach all of these elements as required for a reference to anticipate a claim.

The prior non-final Office Action cited Jantz at col. 2, lines 12-27 for teaching receiving a reconfiguration request and determining a first configuration of a master storage unit, and Applicants disagreed that Jantz provided the proper teaching at this citation or elsewhere. The June 21, 2005 Final Office Action (and Response to Arguments) has altered its citations to Jantz, with the Examiner citing Jantz at col. 5, lines 60-67, col. 16, lines 28-40, col. 22, lines 16-46, and col. 13, lines 42-67 for teaching receiving a reconfiguration request and at col. 15, lines 5-18 for determining a first configuration in response to the request. The Response to Arguments portion of the Final Office Action states that the “request for reconfiguration is being sent from the I/O management stations and also is being sent as events from the controllers” such as “needs attention” and these requests are responded to update existing configuration or update controller software.

Applicants disagree that Jantz at these citations teaches receiving a reconfiguration request and responding by determining a first configuration (i.e., existing) of a master storage unit. At col. 5, lines 60-67, Jantz simply states that requests from I/O management stations 112, 120 are converted by servers 132, 134 into command packets that are delivered to RAID controllers 128, 130. There is no discussion of a reconfiguration request being sent and particularly, that one is received “at the remotely-located reconfiguration system” (note, the I/O management station cannot be cited as the remote reconfiguration system AND for transmitting the reconfiguration request which in claim 1 is received by the remote reconfiguration system). The Advisory Action merely restates that the Examiner believes that “needs

attention” events from I/O management stations are reconfiguration requests. Applicants disagree for the reasons provided above and in the following paragraphs.

Jantz at col. 16, lines 28-40 describes a monitor applet 822 that provides an “event listener” thread for management station. There is no discussion of transmission or receipt of a reconfiguration request for a client data storage system, and Applicants strongly disagree that the language of claim 7 is read on by “events” transmitted by applet 822 as asserted by the Examiner in the Response to Arguments in the Final Office Action.

At col. 22, lines 16-46 and continuing through the rest of col. 22+, Jantz is discussing the desirability of providing event notifications of a configuration change NOT that remote reconfiguration system is receiving a request for reconfiguration and responding by determining the first or existing configuration of the system. Instead, the event notification is used to notify other devices in the network of the changed or second configuration of the device.

At col. 13, lines 42-67, Jantz teaches an information window 604 used to view the status of nodes in a network but provides no teaching of the claim limitations of claim 7. At col. 15, lines 5-18, Jantz teaches the starting of a “discover monitor applet (DMA)” but fails to teach “in response to receiving of the reconfiguration request” that it would be useful to determine a first or existing configuration of a master storage unit “with the remotely-located reconfiguration system.” For these reasons, Jantz does not anticipate the method of claim 7, and the rejection should be withdrawn as not properly supported.

Further, the Office Action cites Jantz for teaching transmitting a recommended reconfiguration that is generated based on the reconfiguration request, the first configuration, and results of monitoring of the data storage system. The Examiner failed to response to Applicants’ arguments stating that Jantz failed to teach this unique limitation of claim 7 in the Advisory Action. The August 21, 2005 Office Action cites Jantz at col. 2, lines 22-27, col. 3, lines 1-22, col. 24, lines 11-13, and in the Response to Arguments at col. 4, lines 16-38 and col. 7, lines 20-65. Generally, Jantz teaches, beginning at col. 17, line 44 that the actions a user takes to change the configuration of the managed devices in a network, and this general discussion fails to suggest that a recommended reconfiguration is provided based on monitoring but

instead teaches passing a change request to each controller of a managed device to change its configuration when initiated by a user, i.e., there is not a preparation of a reconfiguration based on monitoring, on a determined existing, first configuration, and on a request from the data storage system.

Addressing the Examiner's specific citations, at col. 2, lines 22-27, Jantz teaches a "step of editing the source configuration description before issuing the configuration change commands" to the managed devices. At this point, Jantz fails to teach that a transferred logical implementation is "generated based on the reconfiguration request, the first configuration, and results of the monitoring" as called for in claim 7.

At col. 3, lines 1-22, Jantz teaches that a controller at the managed storage device processes a configuration request from the management application to configure a storage device(s) and then informs the management application that the configuration has been implemented. There is no teaching here that the configuration request is "generated based on the reconfiguration request" (see, discussion above for lack of Jantz teaching receiving a reconfiguration request from a data storage system) or that the request is generated based on a first configuration or based on monitoring results. Similarly, at col. 24, lines 11-13, Jantz teaches that a user can issue a configuration change command but there is no discussion that configuration change command is generated based on a reconfiguration request from the data storage system, on monitoring results, or on the existing, determined configuration of the data storage system

At col. 4, lines 16-38, Jantz provides an introduction to its method and apparatus but no teaching of the transmitting step of claim 7 (monitoring is mentioned but not in relation to responding to a reconfiguration request to generate a reconfiguration of a storage system/unit). At col. 7, lines 20-65, Jantz discusses discovering a set of managed devices and monitoring such devices. Configuration is also performed of some of the managed devices. However, there is again no discussion of transferring "a logical implementation of a data storage system configuration" that is "generated based on the reconfiguration request, the first configuration, and results of the monitoring." As discussed above, there is no discussion in Jantz of receiving a reconfiguration request and, as a result, such a

request cannot be used in generating a logical reconfiguration implementation. As this discussion of the particular citations of Jantz shows, Jantz does not disclose the transferring step of claim 7, and for this additional reason, the rejection of claim 7 based on Jantz is improper and should be reversed.

Claim 11 depends from claim 7 and is believed allowable over Jantz as depending upon an allowable base claim.

B. Rejection of Claims 17-20 Under 35 U.S.C. §102(e) Based on Jantz is Improper

Also, in the June 21, 2005 Office Action, the Examiner rejected claims 17-20 under 35 U.S.C. §102(e) as being anticipated by Jantz. This rejection is traversed based on the following remarks with claim 17-20 being grouped separately from claims 7 and 11, and Appellants request that the rejection be reversed as not properly supported by Jantz.

Claim 17 is directed to a method of remotely reconfiguring a data storage system. The method of claim 17 calls for a reconfiguration system to receive a reconfiguration request, to determine a first configuration of a data storage system associated with the request, to identify a “level of configuration services” for the data storage system, and to define a logical implementation for the data storage system based on the identified level of service and based on the first configuration. The logical implementation is then transferred to the storage management host installed on the data storage system and executed to reconfigure the master storage unit. To the point that the limitations of claim 17 are similar to claim 7, the reasons provided for allowing claim 7 are believed applicable to claim 17.

Additionally, however, Jantz fails to show the feature of claim 17 of defining a logical implementation of a reconfiguration based on an identified level of service and on a first configuration. The term “level of service” is defined in Applicants’ specification at least in the paragraph beginning at page 15, line 12, and the use of such levels of service to determine/define how a system is to be reconfigured is not taught or suggested by Jantz.

The Advisory Action states that reading this limitation broadly would result in Jantz teaching this limitation with a “version level” of software being pushed down to

computers in a network. However, Applicants believe that this is reading the limitation so broadly that it simply reads the limitation out of the claim, which is impermissible. The term “level of reconfiguration services” for a client data storage system has a meaning based on its face that is different from a version level of software and further, this ordinary meaning is supported by definitions provided for levels of service in Applicants’ specification as each level of service has to do with how to configure a data storage system including assigning LUNs, changing RAID levels, and the like without mention of a software version level.

Further, the Final Office Action cites Jantz at col. 21, lines 25-42 for teaching determining the level of reconfiguration services from a plurality of service level options with its discussion of “identifying software version.” However, in the cited text, Jantz is merely discussing whether the software on the managed device is of the correct version to “perform a particular configuration update.” Jantz is not teaching determining what level of service an operator of a storage system expects based on the level of service option they have selected. Claim 17 calls for the level of service to be determined AND for this level of service to be used to define a logical implementation of a reconfiguration. Jantz fails to teach either determining the level of service of storage system OR defining a reconfiguration based on such a determined level of service.

The Response to Arguments again urges the version of software determining in Jantz teaches this limitation, but Applicants disagree as the software version check in Jantz is simply used to determine whether a new installation software version needs to be installed. The software version is not used to define what type of reconfiguration should be provided to a storage unit/system. For this reason, Jantz fails to anticipate the method of claim 17, and Applicants request that the rejection be reversed.

Yet further along these lines, the Office Action at para. 18 with respect to claim 9 states that Jantz “fails to show a method including identifying a predetermined level of reconfiguration services from a plurality of service level options and creating the logical implementation based on the identified level of reconfiguration services.” Applicants agree with this statement which supports the

allowance of Claim 17 and is in direct conflict with the Response to Arguments at para. 26.c.

Claims 18-20 depend from claim 17 and are believed allowable for at least the reasons provided for allowing claim 17. Further, claim 18 defines what is meant by “service level options.” The Office Action cites Jantz at col. 5, lines 12-23 for teaching this limitation, but, at this citation, Jantz is merely discussing that the system of devices shown in Figure 1 of Jantz is an exemplary “configuration” of a storage system and is not discussing service level options. The Response to Arguments fails to discuss this additional reason for allowance of claim 18, and this additional reason is not discussed in the Advisory Action.

C. Rejection of Claims 1, 4, and 5 Under 35 U.S.C. §103(a) Based on Jantz and Axberg is Improper

In the Final Office Action, claims 1, 4, and 5 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg. This rejection is traversed based on the following remarks, and Appellants request that the rejection be reversed as not properly supported by Jantz and Axberg.

Claim 1 is directed to a remote configuration computer system that includes a storage management host installed in a client data storage system. The data storage system has a first configuration, and the storage management host provides remote access and a communication link to the master storage unit and host of the data storage system. The system further comprises a reconfiguration center located remote to the storage management system. The reconfiguration center **receives a reconfiguration request and in response transfers a logical implementation “selected or created based on the reconfiguration request and the first configuration” to the client data storage system “via the storage management host.”** The combination of Jantz and Axberg fails to teach or suggest a system for remote reconfiguring of a data storage system as called for in claim 1, and Applicants request that this rejection be reversed.

The reasons provided for allowing claim 7 over Jantz are believed applicable to claim 1, and Axberg fails to overcome the deficiencies of Jantz. As with claim 7, claim 1 calls for the remote reconfiguration center to receive a reconfiguration

request. As discussed with reference to claim 7, Jantz fails to teach this limitation. There is no discussion of any of the managed devices or the client system requesting reconfiguration (the notification of events is not a transmittal of a request for reconfiguration but merely a transmittal of information such as completion of a change of configuration as discussed above with reference to claim 7) but instead this decision is made by an operator of the Jantz I/O management stations (which the Examiner admits sends the request for reconfiguration in paragraph 26.a. of the Response to Arguments in the Final Office Action). Axberg does not overcome this deficiency and is not cited for providing this teaching. Hence, claim 1 is not suggested by the combined teaching of Jantz and Axberg, and the rejection should be reversed.

Further, claim 1 calls for the logical implementation to be “selected or created based on the reconfiguration request and the first configuration.” As discussed above with reference to claim 7, Jantz fails to teach receiving a reconfiguration request and so, cannot teach selecting or creating a logical implementation based on such a request. The logical implementation is also based on the first configuration. Jantz provides no teaching that it is useful or desirable to select or create a logical implementation defining a second configuration based on the first or existing configuration of its managed devices. For this additional reason, Jantz fails to teach or suggest all of the limitation of claim 1. Further, Axberg is only cited for teaching a data storage subsystem and not for overcoming these detailed deficiencies of Jantz. Hence, the combination of Jantz and Axberg fails to make the system of claim 1 obvious.

Claims 4 and 5 depend from claim 1 and are believed allowable for at least the reasons for allowing claim 1.

D. Rejection of Claims 9 and 10 Under 35 U.S.C. §103(a) Based on Jantz and Axberg is Improper

In the Final Office Action, claims 9 and 10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg. This rejection is traversed based on the following remarks with claims 9 and 10 being grouped

separately from independent claim 1, and Appellants request that the rejection be reversed as not properly supported by Jantz and Axberg.

Claim 9 calls for determining a level of reconfiguration services and creating the logical implementation based on the identified level. As discussed with respect to claim 17, Jantz fails to teach or suggest the utilization of levels of service with regard to generating reconfiguration logical implementations.

Axberg is cited at col. 2, line 47 to col. 3, line 22 for overcoming this deficiency of Jantz (note, however, that Axberg was not cited for overcoming a similar deficiency in Jantz with reference to claim 17). Axberg at this citation is discussing a step-by-step process of configuring devices in an information processing network but provides no discussion that such a process should (or is) performed based on a predetermined level of service (such as defined in Applicants' specification) for the network. Hence, Axberg fails to overcome the deficiencies of Jantz. Claim 10 is similar to claim 18, and the reasons for allowing claim 18 over Jantz are applicable to claim 10. For these additional reasons, claims 9 and 10 are allowable over Jantz and Axberg.

E. Rejection of Claims 2 and 3 Under 35 U.S.C. §103(a) Based on Jantz and Axberg and Vacon is Improper

In the Final Office Action, the Examiner rejected claims 2 and 3 under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg further in view of U.S. Pat. No. 5,151,895 ("Vacon"). Claims 2 and 3 depend from claim 1 and are believed allowable as depending from an allowable base claim. Further, Vacon fails to overcome the deficiencies of Jantz and Axberg discussed above with reference to claim 1.

F. Rejection of Claim 6 Under 35 U.S.C. §103(a) Based on Jantz and Axberg and Official Notice is Improper

In the Final Office Action, the Examiner rejected claim 6 under 35 U.S.C. §103(a) as being unpatentable over Jantz in view of Axberg further in view of "Official Notice." Claim 6 depends from claim 1 and is believed allowable as depending from an allowable base claim. Official Notice is not taken for the deficiencies pointed out with regard to Jantz or Axberg with regard to claim 1.

Conclusion

In view of all of the above, claims 1-7, 9-11, and 17-20 are believed to be allowable and the case in condition for allowance. Appellants respectfully request that the Examiner's rejections based on 35 U.S.C. §102 and §103 be reversed for the pending claims.

Respectfully submitted,

Date: 10/12/05

_____

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VIII. CLAIMS APPENDIX

Claim 1: A remote reconfiguration computer system, comprising:

a storage management host installed in a client data storage system, wherein the client data storage system includes a data storage subsystem having a first configuration and comprising at least one master storage unit for storing data and providing access to the stored data and one host linked to the master storage unit, and further wherein the storage management host is communicatively linked to and adapted to provide remote access to the master storage unit and the host; and

a reconfiguration center communicatively linked to the storage management host, the reconfiguration center being located remote to the client data storage system and configured for receiving a reconfiguration request for the client data storage system and for, in response to the received reconfiguration request, transferring a logical implementation of a second configuration to the client data storage system via the storage management host, wherein the client data storage system is operable to process the logical implementation to configure the data storage subsystem in the second configuration, wherein the logical implementation is selected or created based on the reconfiguration request and the first configuration.

Claim 2: The computer system of claim 1, wherein the storage management host is a terminal server configured to provide Ethernet connection to a local area network (LAN) connected to the host and the master storage unit.

Claim 3: The computer system of claim 2, wherein the storage management host is further configured to provide serial connection with the master storage unit.

Claim 4: The computer system of claim 1, further including a second data storage subsystem having at least one master storage unit and at least one host linked to the master storage unit and wherein the master storage unit of the second data storage subsystem is a different type of data storage device than the master storage unit of the other data storage subsystem.

Claim 5: The computer system of claim 1, wherein the transferred logical implementation includes executables that affect a change in the first configuration selected from the group consisting of a logical unit number (LUN) size change, cache blocking, establishing hot standby, changing RAID, logically moving the master storage unit or a portion thereof, mainframe device type changing, adding channels, and increasing performance.

Claim 6: The computer system of claim 1, wherein the reconfiguration center includes a modem and the client data storage system includes a dialback modem, wherein the dialback modem is adapted to respond to a connection initiated from the modem by requesting entry of a password, to verify an entered password, to upon verification of the password disconnect the connection and initiate a connection to the modem.

Claim 7: A method for remotely reconfiguring a data storage system, comprising:

- installing a storage management host within a client data storage system and communicatively linking the storage management host to a remotely-located reconfiguration system and to a master storage unit in the client data storage system;
- monitoring the client data storage system;
- based on the monitoring, transmitting a recommended reconfiguration for the master storage unit;
- at the remotely-located reconfiguration system, receiving a reconfiguration request for the client data storage system;
- in response to the receiving of the reconfiguration request, determining a first configuration of the master storage unit with the remotely-located reconfiguration system;
- transferring from the reconfiguration system a logical implementation of a data storage system configuration to the storage management host, the logical implementation being generated based on the reconfiguration request, the first configuration, and results of the monitoring; and
- executing the logical implementation to reconfigure the master storage unit from the first to a second configuration.

Claim 9: The method of claim 7, further including identifying a predetermined level of reconfiguration services from a plurality of service level options and creating the logical implementation based on the identified level of reconfiguration services.

Claim 10: The method of claim 9, wherein the service level options comprises services selected from the group consisting of changing logical unit number (LUN) size, cache blocking, establishing hot standby, changing RAID, logically moving the master storage unit or a portion thereof, changing mainframe device type, adding channels, increasing performance, and providing ongoing configuration monitoring.

Claim 11: The method of claim 7, further including remotely verifying and testing the second configuration.

Claim 17: A method for remotely reconfiguring a data storage system, comprising:

- installing a storage management host within a client data storage system, the client data storage system having a first configuration;

- communicatively linking the storage management host to a remotely-located reconfiguration system and to a master storage unit in the client data storage system;

- receiving a reconfiguration request for the client data storage system at the remotely-located reconfiguration system;

- determining with the remotely-located reconfiguration system a first configuration of the client data storage system including the master storage unit;

- identifying a level of reconfiguration services from a plurality of service level options for the client data storage system;

- defining a logical implementation for the client data storage system based on the identified level of reconfiguration services and the first configuration;

- transferring from the reconfiguration system a logical implementation of a data storage system configuration to the storage management host; and

- executing the logical implementation to reconfigure the master storage unit from a first to a second configuration.

Claim 18: The method of claim 17, wherein the service level options comprise services selected from the group consisting of changing logical unit number (LUN) size, cache blocking, establishing hot standby, changing RAID, logically moving the master storage unit or a portion thereof, changing mainframe device type, adding channels, increasing performance, and providing ongoing configuration monitoring.

Claim 19: The method of claim 17, further including remotely verifying and testing the second configuration.

Claim 20: The method of claim 17, further including prior to the receiving the reconfiguration request, monitoring the client data storage system and based on the monitoring, issuing a recommended reconfiguration for the client data storage system.

IX. EVIDENCE APPENDIX

No copies of evidence are required with this Appeal Brief. Appellants have not relied upon any evidence submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132.

X. RELATED PROCEEDINGS APPENDIX

There are no copies of decisions rendered by a court or the Board to provide with this Appeal as there are no related proceedings.